

WHAT IS CLAIMED IS:

1. An apparatus for aligning and dispensing a plurality of solder columns in an array, said array of solder columns being adapted to be attached to an array of corresponding terminals disposed on one side of a substrate of a ceramic column grid array package, said apparatus comprising:

a vibrator;

an elongated alignment member supported on said vibrator and including a plurality of longitudinal guide grooves, said guide grooves being equal in number to the terminals and spaced from each other by a distance substantially equal to the space between each adjacent terminals, said alignment member having an upstream end and a downstream end;

a cover secured on said alignment member and shaped to cover part of said guide grooves; and

a source of solder columns for feeding the solder columns over the upstream end of said alignment member so that the solder columns are received in said guide grooves while said alignment member is vibrated by said vibrator.

2. The apparatus of claim 1, wherein said alignment member has a longitudinal axis, and said cover has an upstream end inclined relative to the longitudinal axis of said alignment member and a straight downstream end, said inclined upstream end of said cover being spaced from the upstream end of said alignment member so that the solder columns may be scattered over the upstream end of said alignment member, and said downstream end of said cover being spaced from the downstream end of said alignment member by a distance greater than the length of the single solder column and less than twice the length of the solder column.

3. The apparatus of claim 2, wherein said cover is transparent.

4. The apparatus of claim 1, wherein said alignment member is downwardly inclined from the upstream end toward the downstream end.

5. The apparatus of claim 1, further comprising an end

plate secured to the downstream end of said alignment member.

6. The apparatus of claim 1, wherein said guide grooves have a width slightly greater than the diameter of the solder columns.

7. The apparatus of claim 1, further comprising an inclined collection chute operatively associated with and located below said alignment member, said collection chute including a bottom plate having upper and lower ends and opposite sides extending between the upper and lower ends, a pair of side plates secured to the sides of said bottom plate, and an end plate secured to the upper end of said bottom plate, and a collection box located adjacent to the lower end of the bottom plate.